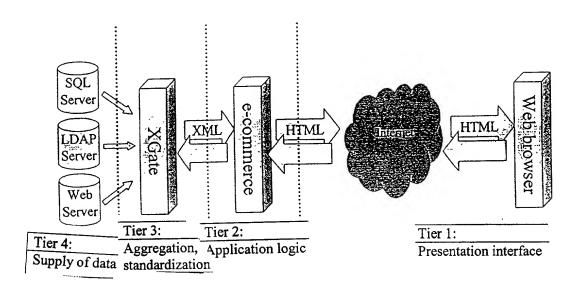
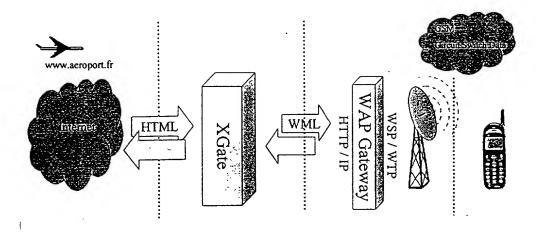


E-commerce application



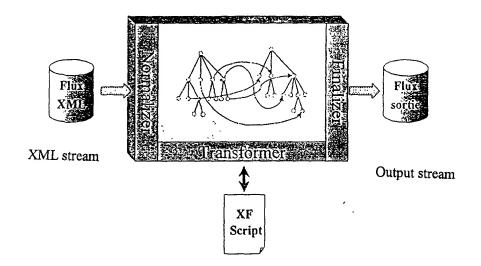
ı

HTML-WML Conversion

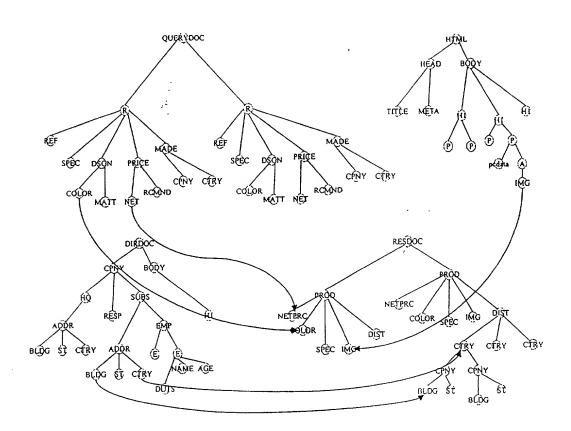


Tier 4:	Tier 3:	Tier 2:	Tier T:
Supply of data	Conversion	Adaptation, Transport	Presentation interface

Transformation: Stream



Aggregation and Transformation



<xf:template match="P">
 (procedure P)
 </xf:template>

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FIGURE 9

<xf:template match="HTML">
 XF.trace();
 XF.applyTemplates("origin().descendant(all,(FRAMESET1BODY))");
</xf:template>

<xf:template name="body" match="BODY"> // 3

if (null == XF.getVar("framed")) {
 XF.result().write(prolog);
 var url = XF.getURL();
 if (url.indexOf("bayFlight") > 0) {
 XF.applyTemplates("origin().descendant(all,TBODY)");
 At yet ("origin().descendant(all,TBODY)");
 XF.applyTemplates("origin().descendant(all,IMG)");
 XF.applyTemplates("origin().descendant(all,IMG)");
 XF.applyTemplates("origin().descendant(all,IMG)"); 115 (XF. result().write(epilog);) 412 </xf:template>

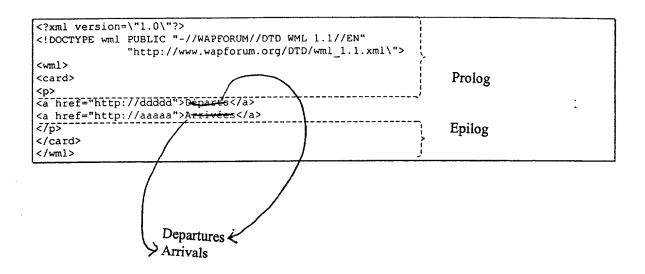
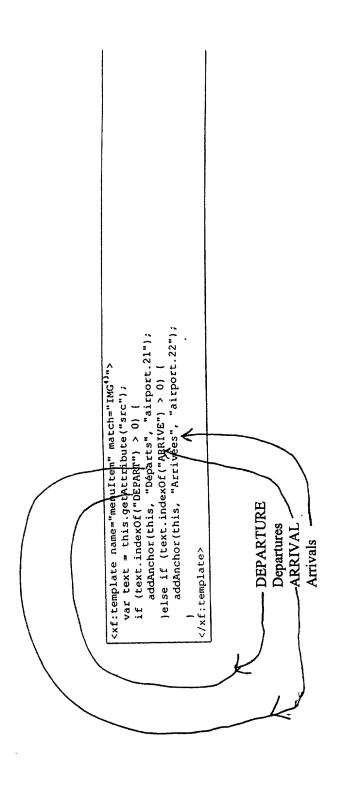


FIGURE 13



```
function addAnchor(node, text, localRef) (
  while (null != (node = node.getParentNode())) {
   if (node.getNodeName() == 'A') {
      XF.result().writeAnchor(text, node.getAttribute("href"), localRef)
      break;
<xf :scripts>
                                                                                                                                                                                                                                                                                      </xf:scripts>
```

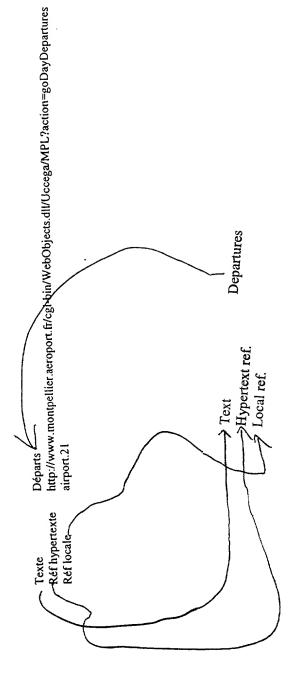
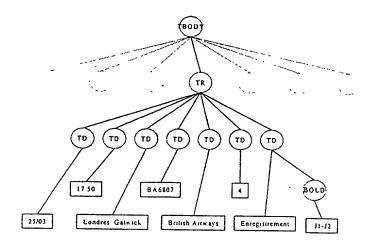


Figure 16

Representation of schedule table



The template procedure for each portion of text is written simply:

Flights
10:50 Paris-Cdg
AF7725
Check in D1-E2
11:15 Lyon
Options Back

FIGURE 19



FRENCH AIRPORTS

Daily departures
Saturday, June 17

Destination	Flight No.	Airline	Gate	Notes	Arrival time
	140.			Check in D1-E2	
				Departed 11:23	
		_		Check in F1-F2	

```
[Jun 17 12:38:55 CEST 2000] Service-47 started
[Jun 17 12:38:55 CEST 2000] Service-47, Proxy: plain copy
[Jun 17 12:38:55 CEST 2000] Service-47-in: GET http://www.Nantes.aeroport.fr HTTP/1.0
accept: text/html
proxy-connection: Keep-Alive
accept-charset: ISO-8859-1, UTF-8
host: www.Nantes.aeroport.fr
user-agent: JaxoXform (1.25)
[Jun 17 12:38:56 CEST 2000] Service-47-out: HTTP/1.0 200 OK
content-type: text/html
date: Sat, 17 Jun 2000 09:42:47 GMT
last-modified: Fri, 12 May 2000 14:53:47 GMT
accept-ranges: bytes
link: <http://www.aeroport.fr/?PageServices>; rel="PageServices"
content-length: 5932
server: Netscape-Enterprise/3.5.1
[Jun 17 12:38:56 CEST 2000] Service-47-out, Xform: parsing...
Cannot start element "META": a required element is missing in BODY
   line 3, col 76
in: '"Content-Type" CONTENT="text/html; charset=iso-8859-1">'
   at: >----
Cannot start element "META": a required element is missing in BODY
  line 4, col 451
         're, terminal, piste, runway, fret aerien, air freight">'
   at: >----
Cannot start element "META": a required element is missing in BODY
  line 5, col 403
         'mercial services, tourism in the Aquitaine region ..."> </head>'
   in:
   at: >-----
Warning: invalid end tag: "HEAD"
  line 5, col 413
       'rvices, tourism in the Aquitaine region ..."> </head>'
  Warning: invalid end tag: "NOFRAMES"
   line 60, col 12
   in: '</noframes>'
   at: >----*
[Jun 17 12:38:57 CEST 2000] Service-47-out, Xform: transforming...
[Jun 17 12:38:57 CEST 2000] Service-47-out, Xform: done.
[Jun 17 12:38:57 CEST 2000] Service-47 ended
[Jun 17 12:38:57 CEST 2000] Captured response ------
HTTP/1.0 302 Redirected by transform
location: http://xgate.jaxo.com/gjm/airport.rd
content-type: text/vnd.wap.wml; charset=ISO-8859-1
date: Sat, 17 Jun 2000 09:42:47 GMT
last-modified: Fri, 12 May 2000 14:53:47 GMT
accept-ranges: bytes
link: <http://www.aeroport.fr/?PageServices>; rel="PageServices"
server: Netscape-Enterprise/3.5.1
```

```
[Jun 17 12:38:58 CEST 2000] Service-48 started
[Jun 17 12:38:58 CEST 2000] Service-48, Proxy: plain copy
[Jun 17 12:38:58 CEST 2000] Service-48-in: GET
http://www.nantes.aeroport.fr/scripts/WebObjects/Uccega/NTE HTTr/1.0
accept: text/html
proxy-connection: Keep-Alive
accept-charset: ISO-8859-1, UTF-8
host: www.nantes.aeroport.fr
user-agent: JaxoXform (1.25)
[Jun 17 12:38:59 CEST 2000] Service-48-out: HTTP/1.0 200 NeXT
content-type: text/html
date: Sat, 17 Jun 2000 09:42:49 GMT
content-length: 321
server: Netscape-Enterprise/3.5.1
[Jun 17 12:38:59 CEST 2000] Service-48-out, Xform: parsing...
[Jun 17 12:38:59 CEST 2000] Service-48-out, Xform: transforming...
'Jun 17 12:38:59 CEST 2000] Service-48-out, Xform: done.
[Jun 17 12:38:59 CEST 2000] Service-48 ended
[Jun 17 12:38:59 CEST 2000] Captured response -----
HTTP/1.0 302 Redirected by transform
location: http://xgate.jaxo.com/gjm/airport.rd
content-type: text/vnd.wap.wml; charset=ISO-8859-1
date: Sat, 17 Jun 2000 09:42:49 GMT
server: Netscape-Enterprise/3.5.1
```

```
[Jun 17 12:38:59 CEST 2000] Service-49 started
[Jun 17 12:39:00 CEST 2000] Service-49, Proxy: plain copy
[Jun 17 12:39:00 CEST 2000] Service-49-in: GET
http://www.nantes.aeroport.fr/scripts/WebObjects/Uccega/NTE.woa/2093200000268020000023311
00000536431/Main.wo/7192100000436431/1/1/Mermoz HTTP/1.0
accept: text/html
proxy-connection: Keep-Alive
accept-charset: ISO-8859-1, UTF-8
host: www.nantes.aeroport.fr
user-agent: JaxoXform (1.25)
[Jun 17 12:39:05 CEST 2000] Service-49-out: HTTP/1.0 200 NeXT
content-type: text/html
date: Sat, 17 Jun 2000 09:42:52 GMT
content-length: 490
server: Netscape-Enterprise/3.5.1
[Jun 17 12:39:05 CEST 2000] Service-49-out, Xform: parsing...
[Jun 17 12:39:05 CEST 2000] Service-49-out, Xform: transforming...
[Jun 17 12:39:05 CEST 2000] Service-49-out, Xform: done.
[Jun 17 12:39:05 CEST 2000] Service-49 ended
[Jun 17 12:39:05 CEST 2000] Captured response -----
HTTP/1.0 302 Redirected by transform
location: http://xgate.jaxo.com/gjm/airport.rd
content-type: text/vnd.wap.wml; charset=ISO-8859-1
date: Sat, 17 Jun 2000 09:42:52 GMT
server: Netscape-Enterprise/3.5.1
```

```
[Jun 17 12:39:05 CEST 2000] Service-50 started
[Jun 17 12:39:06 CEST 2000] Service-50, Proxy: plain copy
[Jun 17 12:39:06 CEST 2000] Service-50-in: GET
http://www.aeroport.fr/Uccega/NTE/Html/FR/HP/home.htm HTTP/1.0
accept: text/html
proxy-connection: Keep-Alive
accept-charset: ISO-8859-1, UTF-8
host: www.aeroport.fr
user-agent: JaxoXform (1.25)
[Jun 17 12:39:10 CEST 2000] Service-50-out: HTTP/1.0 200 OK
content-type: text/html
date: Sat, 17 Jun 2000 09:42:57 GMT
last-modified: Wed, 17 May 2000 16:10:48 GMT
accept-ranges: bytes
link: <a href="http://www.aeroport.fr/Uccega/NTE/Html/FR/HP/home.htm?PageServices">http://www.aeroport.fr/Uccega/NTE/Html/FR/HP/home.htm?PageServices>;
rel="PageServices"
content-length: 507
server: Netscape-Enterprise/3.5.1
[Jun 17 12:39:10 CEST 2000] Service-50-out, Xform: parsing...
Cannot start element "BODY": not permitted by the document structure.
   line 11, col 35
          '<noframes><body bgcolor="#FFFFFF">'
   at: >----*
[Jun 17 12:39:11 CEST 2000] Service-50-out, Xform: transforming...
[Jun 17 12:39:11 CEST 2000] Service-50-out, Xform: done.
[Jun 17 12:39:11 CEST 2000] Service-50 ended
[Jun 17 12:39:11 CEST 2000] Captured response -----
\mathtt{HTTP/1.0} 302 Redirected by transform
location: http://xgate.jaxo.com/gjm/airport.rd
content-type: text/vnd.wap.wml; charset=ISO-8859-1
date: Sat, 17 Jun 2000 09:42:57 GMT
last-modified: Wed, 17 May 2000 16:10:48 GMT
accept-ranges: bytes
link: <a href="http://www.aeroport.fr/Uccega/NTE/Html/FR/HP/home.htm?PageServices">http://www.aeroport.fr/Uccega/NTE/Html/FR/HP/home.htm?PageServices>;
rel="PageServices"
server: Netscape-Enterprise/3.5.1
```

```
[Jun 17 12:39:11 CEST 2000] Service-51 started
[Jun 17 12:39:12 CEST 2000] Service-51, Proxy: plain copy
[Jun 17 12:39:12 CEST 2000] Service-51-in: GET
http://www.aeroport.fr/Uccega/NTE/Html/FR/HP/2.htm HTTP/1.0
accept: text/html
proxy-connection: Keep-Alive
accept-charset: ISO-8859-1, UTF-8
host: www.aeroport.fr
user-agent: JaxoXform (1.25)
[Jun 17 12:39:12 CEST 2000] Service-51-out: HTTP/1.0 200 OK
content-type: text/html
date: Sat, 17 Jun 2000 09:43:03 GMT
last-modified: Wed, 17 May 2000 16:10:48 GMT
accept-ranges: bytes
link: <http://www.aeroport.fr/Uccega/NTE/Html/FR/HP/2.htm?PageServices>;
rel="PageServices"
content-length: 2603
server: Netscape-Enterprise/3.5.1
[Jun 17 12:39:13 CEST 2000] Service-51-out, Xform: parsing...
Cannot start element "BODY": a required element is missing in TITLE
  line 10, col 23
        '<BODY bgColor=#ffffff5'
  in:
  at: >-----
[Jun 17 12:39:13 CEST 2000] Service-51-out, Xform: transforming...
[Jun 17 12:39:13 CEST 2000] Service-51-out, Xform: done.
[Jun 17 12:39:13 CEST 2000] Service-51 ended
[Jun 17 12:39:13 CEST 2000] Captured response -----
HTTP/1.0 200 OK
content-type: text/vnd.wap.wml; charset=ISO-8859-1
date: Sat, 17 Jun 2000 09:43:03 GMT
last-modified: Wed, 17 May 2000 16:10:48 GMT
accept-ranges: bytes
link: <http://www.aeroport.fr/Uccega/NTE/Html/FR/HP/2.htm?PageServices>;
rel="PageServices"
server: Netscape-Enterprise/3.5.1
<?xml version="1.0"?>
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.1//EN"
"http://www.wapforum.org/DTD/wml 1.1.xml">
<wml><template><do type="prev" label="Back"><prev/></do></template>
<card title="Montpellier">
<a href="/$(sid)/airport.21">Départs</a>
<a href="/$(sid)/airport.22">Arrıvées</a></card></wml>
```

```
[Jun 17 12:39:18 CEST 2000] Service-52 started
[Jun 17 12:39:18 CEST 2000] Service-52, Proxy: plain copy
[Jun 17 12:39:18 CEST 2000] Service-52-in: GET
http://www.aeroport.fr/scripts/WebObjects/Uccega/NTE?action=goDayDepartures HTTP/1.0
accept: text/html
proxy-connection: Keep-Alive
accept-charset: ISO-8859-1, UTF-8
host: www.aeroport.fr
user-agent: JaxoXform (1.25)
[Jun 17 12:39:26 CEST 2000] Service-52-out: HTTP/1.0 200 NeXT
content-type: text/html
date: Sat, 17 Jun 2000 09:43:17 GMT
content-length: 563
server: Netscape-Enterprise/3.5.1
[Jun 17 12:39:27 CEST 2000] Service-52-out, Xform: parsing...
[Jun 17 12:39:31 CEST 2000] Service-52-out, Xform: transforming...
[Jun 17 12:39:31 CEST 2000] Service-52-out, Xform: done.
[Jun 17 12:39:31 CEST 2000] Service-52 ended
[Jun 17 12:39:31 CEST 2000] Captured response ------
HTTP/1.0 302 Redirected by transform
location: http://xgate.jaxo.com/gjm/airport.rd
content-type: text/vnd.wap.wml; charset=ISO-8859-1
date: Sat, 17 Jun 2000 09:43:17 GMT
server: Netscape-Enterprise/3.5.1
```

```
[Jun 17 12:39:32 CEST 2000] Service-53 started
[Jun 17 12:39:32 CEST 2000] Service-53, Proxy: plain copy
[Jun 17 12:39:32 CEST 2000] Service-53-in: GET
http://www.aeroport.fr/scripts/WebObjects/Uccega/NTE.woa/67980000005783200000210010000083
6431/Apt_FlightsResponse.wo/3641300000736431/1/1/Mermoz HTTP/1.0
accept: text/html
proxy-connection: Keep-Alive
accept-charset: ISO-8859-1, UTF-8
host: www.aeroport.fr
user-agent: JaxoXform (1.25)
[Jun 17 12:39:33 CEST 2000] Service-53-out: HTTP/1.0 200 NeXT
content-type: text/html
date: Sat, 17 Jun 2000 09:43:23 GMT
content-length: 471
server: Netscape-Enterprise/3.5.1
[Jun 17 12:39:33 CEST 2000] Service-53-out, Xform: parsing...
[Jun 17 12:39:34 CEST 2000] Service-53-out, Xform: transforming...
[Jun 17 12:39:34 CEST 2000] Service-53-out, Xform: done.
[Jun 17 12:39:34 CEST 2000] Service-53 ended
[Jun 17 12:39:34 CEST 2000] Captured response -----
HTTP/1.0 302 Redirected by transform
location: http://xgate.jaxo.com/gjm/airport.rd
content-type: text/vnd.wap.wml; charset=ISO-8859-1
date: Sat, 17 Jun 2000 09:43:23 GMT
server: Netscape-Enterprise/3.5.1
```

```
[Jun 17 12:39:34 CEST 2000] Service-54 started
[Jun 17 12:39:34 CEST 2000] Service-54, Proxy: plain copy
[Jun 17 12:39:34 CEST 2000] Service-54-in: GET
http://www.aeroport.fr/scripts/WebObjects/Uccega/NTE.woa/67980000005783200000210010000083
6431/Apt_DayFlights.wo/7507100000936431/0.1/1/Mermoz HTTP/1.0
accept: text/html
proxy-connection: Keep-Alive
accept-charset: ISO-8859-1, UTF-8
host: www.aeropoit.fr
user-agent: JaxoXform (1.25)
[Jun 17 12:39:41 CEST 2000] Service-54-out: HTTP/1.0 200 NeXT
content-type: text/html
date: Sat, 17 Jun 2000 09:43:31 GMT
content-length: 30543
server: Netscape-Enterprise/3.5.1
[Jun 17 12:39:41 CEST 2000] Service-54-out, Xform: parsing...
[Jun 17 12:39:43 CEST 2000] Service-54-out, Xform: transforming...
[Jun 17 12:39:47 CEST 2000] Service-54-out, Xform: done.
[Jun 17 12:39:47 CEST 2000] Service-54 ended
[Jun 17 12:39:47 CEST 2000] Captured response -----
HTTP/1.0 200 NeXT
content-type: text/vnd.wap.wml; charset=ISO-8859-1
date: Sat, 17 Jun 2000 09:43:31 GMT
cache-control: max-age=0
cache-control: must-revalidate
server: Netscape-Enterprise/3.5.1
<?xml version="1.0"?>
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.1//EN"
"http://www.wapforum.org/DTD/wml_1.1.xml">
<wml><template><do type="prev" label="Back"><prev/></do></template>
<card title="Vols">
10:50 Paris-Cdg<br/>$#183; AF7725<br/>$#183; Enregistrement Dl-E2<br/>br/>11:15
Lyon<br/>6#183; AF7862<br/>6#183; Décollé 11:23<br/>11:15 Nice<br/>5#183;
SN4882<br/>11:15 Nice<br/>6#183; FU172<br/>6#183; Enregistrement Fl-F2<br/>11:55
Marseille<br/>%#183; AF5763<br/>%#183; Enregistrement H1-H2<br/>12:00 Londres
Gatwick<br/>&#183; AF5852<br/>br/>6#183; Enregistrement I1-I2<br/>br/>12:15 Bruxelles<br/>br/>&#183;
SN3610<br/>6#183; Enregistrement G1-G2<br/>512:15 Bruxelles<br/>6#183; VM103<br/>14:00
Palma<br/>6#183; 2R478<br/>14:15 Paris-Cdg<br/>6#183; AF7727<br/>5:45 Paris-
Cdg<br/>&#183; AF7729<br/>555 Brest<br/>67729<br/>68183; AF5853<br/>6729<br/>68183; AF5853<br/>6833; AF7729<br/>6833; AF7729<
JK4544<br/>16:15 Athenes<br/>6#183; RN1602<br/>17:00 Athenes<br/>6#183; EY932<br/>17:40
Marseille<br/>&#183; FU765<br/>br/>18:35 Marseille<br/>&#183; AF5765<br/>br/>18:40 Londres
Gatwick<br/>6#183; AF5854<br/>18:50 Londres Gatwick<br/>6#183; BA6807<br/>19:20
Nice<br/>%#183; FU176<br/></card></wml>
```

```
<!--
    $Id: xfdoc_0.1.dtd,v 1.12 1999/05/17 15:56:26 pgr Exp $
    (C) Copyright JAXO-Europe SA 1999-2000
    This work contains confidential trade secrets of JAXO-Europe SA.
    Use, examination, copying, transfer and disclosure to others
   are prohibited, except with the express written agreement of JAXO.
    xf:doc documents conversion scripts
    Typical usage:
    <?xml version='1.0'?>
    <!DOCTYPE xf:doc PUBLIC "-//JAXO//DTD XFDOC 0.1 Draft//EN"</pre>
                         "http://www.jaxo.com/DTD/xfdoc_0.1.dtd">
    <xf:doc xmlns:xsl="http://www.jaxo.com/DTD/xfdoc_0.1.dtd" version='1.0'>
    <xf:template match="X">
    <!-- ECMAScript for X -->
    </xf:template match="X">
    <xf:template match="Y">
    <!-- ECMAScript for Y -->
    </xf:template match="Y">
    <xf:scripts>
    <!-- local scripts and variables, called from any template -->
    </xf:scripts>
    </xf:doc>
    Author:
    Pierre G. Richard <pgr@jaxo.com>
<!ENTITY % XF.Version "-//JAXO//DTD XFDOC 0.1 Draft//EN">
<!ELEMENT xf:doc (xf:init?, (xf:template | xf:scripts))*>
<!ATTLIST xf:doc
                      CDATA #IMPLIED
    in-content-type
    out-content-type CDATA #REQUIRED
                      CDATA #IMPLIED
    xmlns:xsl
                      CDATA #IMPLIED
    version
<!ELEMENT xf:template CDATA>
<!ATTLIST xf:template
                       CDATA #IMPLIED
    match
                       CDATA #IMPLIED
    name
<!ELEMENT xf:scripts CDATA>
                       CDATA>
<!ELEMENT xf:init
```